

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Zhang et al
Application No.:	10/827494
Filed:	April 19, 2004
For:	IMPROVED CATHETER BALLOON MOLD FORM AND MOLDING PROCESS
Examiner:	Monica Anne Huson
Group Art Unit:	1791

Mail Stop Appeal-Brief Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Docket No.: S63.2B-11346-US01

REPLY BRIEF

This Reply Brief is in reply to the Examiner's Answer mailed August 22, 2008 and is being filed on or before the due date of October 22, 2008 which is set forth in 37 CFR 41.41.

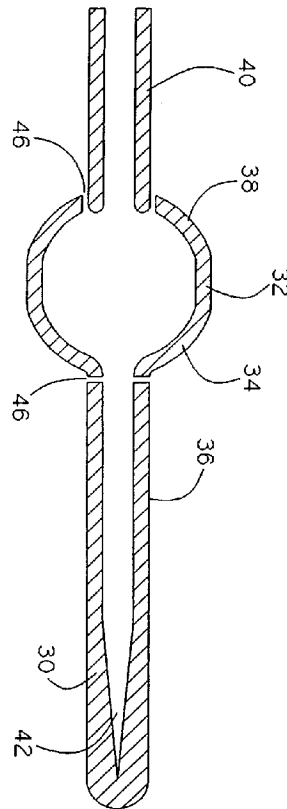
The Examiner's Answer at page 4 "interprets" Leonhardt to size the holes 46 large enough to permit passage of both water and air, but not large enough to expand the parison through those holes. This "interpretation" is a complete hindsight reconstruction of the document, taken from applicant's disclosure, not the document itself. As pointed out in the main brief and discussed further below, the skilled person reading Leonhardt prospectively (as required in MPEP 2142), will understand that Leonhardt's holes are small enough to prevent entry of water when the mold is immersed in water.

At item (3) page 7, the Examiner's Answer asserts that applicant has shown no evidence that Leonhardt's holes are not sized so that water does not enter. Evidence is required if the applicant proposed that Leonhardt's molds actually worked differently than is described in the document. But that is the Examiner's proposition, not the applicant's. Applicant submits that the holes are sized to do everything that the document teaches they do. No additional evidence is required to prove that it works in the manner described. Leonhardt itself is the evidence.

Leonhardt's express teachings are that air is expelled upon expansion of the workpiece, and that expansion of the workpiece occurs after immersion in a water bath for 30-35 seconds. Of logical necessity, therefore, air is retained in the mold for the 30-35 second time period between immersion and expansion. Leonhardt also teaches that the mold is composed of a clear material. The skilled person therefore understands that Leonhardt can observe the mold contents during the process. These statements are not "hypothetical scenarios" as asserted in the Examiner's Answer. They are the express teachings of the document alleged to anticipate the invention. The Examiner has no basis in fact for reconstructing the document to allegedly teach

something else.

The Leonhardt mold is shown in Figure 2, which is reproduced below, rotated so the top is up on the page:



A tubular parison is inserted into the central shaft and expands to fill the bulb after immersion and the 30-35 second delay.

The Examiner's Answer does not provide a rational explanation how this mold could retain air for 30-35 seconds after immersion if the holes were sized to permit entrance of water as the mold is immersed. If water comes in through the holes 46, the air must certainly

leave since the location of the upper set of holes 46 precludes the possibility of backpressure in this mold design. Because the mold has this hole location and it is also designed so that air is retained during 30-35 seconds of immersion, the holes must be sized small enough that the water's surface tension is not overcome by the immersion. This is a simple matter of *common sense*. If the holes 46 were sized as recited in applicant's claim 17, the air will be displaced before the inflation starts and the holes would not function "for escape of air when the mold is filled by the expanding workpiece."

The Examiner's Answer at item (4), page 7, states that the appeal brief does not particularly address claims 6 and 10 -12. This is of course untrue. See sections 4.2, and 4.3 first paragraph, pages 13-14 of the appeal brief.

The Examiner's Answer also contends at pages 5 and 7-8 that the skilled person would experiment to find the most desired or optimum sized holes. As presented, this argument is nothing but a backdoor attempt to impermissibly reconstruct the Leonhardt reference in hindsight using the applicant's teachings as the basis for optimization. The skilled person is led by Leonhardt's teachings to provide a hole size holds air during the immersion until expansion. This is how Leonhardt describes the objective, and that is what the skilled person would seek as optimal. Apart from applicant's disclosure, there is no teaching or suggestion in the record that larger sized holes should be sought, and no basis in the art to contend that such holes would be recognized as optimal if tried.

Concerning the combination of Gass-Erb and Leonhardt, item (5), page 8 of the

Examiner's Answer, asserts that Gass-Erb shows a "concept of agitating a heated fluid while an object is immersed therein." The applicant submits that the question of obviousness is not one of what "concept" Gass-Erb can be said in hindsight to embody, but what modification of Leonhardt's process the document would actually induce a skilled person to make. Immersion of a generic "object" is not the issue, immersion of a specific balloon mold is. Neither document motivates use of a mold with holes sized to allow water to enter and contact the parison when the mold is immersed and Gass-Erb would not lead a skilled person to conclude that a balloon molding bath should be agitated while such a mold is immersed.

Regarding item (6), page 8 of the Examiner's Answer, pertaining to the combination of Garrett and Leonhardt, the question is what modification of Leonhardt's process the document would actually induce a skilled person to make. Neither document motivates use of a mold with holes sized to allow water to enter and contact the parison when the mold is immersed. Moreover, once again, when the Examiner's Answer speaks of a "concept of vibrating objects which are immersed in a fluid," it uses classic impermissible hindsight. The claim does not recite a generic "object" being vibrated while immersed, it recites vibrating a balloon mold during immersion. The proposition that a skilled person would look at Garrett and decide to vibrate a balloon mold is absurd to the point of silly. No reasonable person would ever consider that Garrett has any relevance whatsoever to *any* feature of a balloon blowing process.

The Examiner's Answer reveals the persistent use of impermissible hindsight to selectively reconstruct the cited art and to combine completely non-analogous art. When the documents are considered in their entirety it is clear that the claims at issue are neither anticipated

nor obvious. Reversal of the outstanding rejections is again requested.

Respectfully submitted,

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